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IMMEDIATE REMOVAL ACTION WORK PLAN

Prepared for:

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Elkhart, Indiana

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TABLE OF CONTENTS

Section		Page
1.0	INTRODUCTION	1
2.0	SCOPE OF WORK	1
	2.1 Objectives	1
	2.2 Work Tasks	1
3.0	EXCAVATION OF THE TL5 TEST PIT AREA	3
	3.1 Site Preparation	3
	3.2 Excavation of TL5 Test Pit Area	4
4.0	WASTE HANDLING AND CHARACTERIZATION	5
	4.1 Drum Handling	5
	4.1.1 General	5
	4.1.2 Equipment	5
	4.1.2.1 Safety Equipment	5
	4.1.2.2 Handling Equipment	5
	4.1.3 Drum Handling	6
	4.1.3.1 Working Groups	6
	4.1.3.2 Point-of-Excavation Handling	6
	4.1.3.3 Spill Prevention and Response	7
	4.1.4 Initial Drum Sampling	7
	4.1.5 Storage of Drummed Waste	8
	4.2 Uncontained Liquid Waste Handling	8
	4.3 Containerized Waste Testing	9
	4.3.1 General	9
	4.3.2 Drummed Material Samping	9
	4.3.2.1 Safety Equipment	9
	4.3.2.2 Sampling Equipment	9
	4.3.2.3 Presampling Safety Considerations	10
	4.3.2.4 Drum Entry	10
	4.3.2.5 Sampling Procedures	10
	4.4 Drummed Waste Compatibility Testing	12
	4.5 Waste Characterization For Disposal	12
5.0	EXTENT OF CONTAMINATION SURVEY	14
6.0	HEALTH AND SAFETY	15

TABLES

Table 4.1 Waste Characterization Analysis 13

Himco Waste Away Services, Inc.
Elkhart, Indiana
Immediate Removal Action Work Plan

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1.0 INTRODUCTION

This Immediate Removal Action Work Plan addresses the excavation and disposal of buried solvent wastes identified at the TL5 Test Pit location, Himco Dump Site, Elkhart, Indiana. The scope of work presented in this work plan is consistent with the objectives and planned actions stated in the USEPA Confirmation of General Notice of Liability addressed to Himco Waste Away Services, Inc., May 12, 1992.

2.0 SCOPE OF WORK

2.1 OBJECTIVES

The major objectives of the Immediate Removal Action scope of work are to:

1) Excavate in the vicinity of TL5 Test Pit to locate buried solvent wastes AT INTERVALS OF 1 FT AND THEIR SOURCE.

2) Secure and characterize for disposal purposes the contents of buried containers found within the TL5 excavation.

3) Perform a limited extent of contamination survey in the vicinity of the Immediate Removal Action excavation area. ALONG THE PERIPHERY OF THE SITE IN THE SOUTHEAST CENTRAL PORTION.

2.2 WORK TASKS

The following work tasks will be performed as part of the Immediate Removal Action at the TL5 Test Pit location, in order to meet the above listed objectives:

1) Implementation of the Health and Safety Plan (HASP), PROVIDE FOR A CONTINGENCY PLAN IN CASE OF A RELEASE INCLUDING EVACUATION OF AFFECTED RESIDENTS.

2) Reconnaissance inspection of TL5 Test Pit area.

Drum Removal

3) Mobilization of materials, equipment, and personnel necessary to perform the work.

4) Site preparation including:

- Improvement as necessary of the existing access road(s) to TL5 Test Pit location.

- Construction of decontamination facilities.

- Construction of staging facilities.

5) Excavation of the TL5 Test Pit area and removal of buried waste containers and container contents.

6) Overpacking if necessary and staging of the buried containers for sampling and waste characterization pending final disposal.

7) Collection and management of uncontained solvent waste if encountered in the excavation.

8) Collect and analyze samples of the solvent waste found within the excavation and within buried containers.

9) Transportation and disposal of drummed waste material at appropriate disposal facilities in accordance with federal and state regulations.

10) Backfilling of the excavation with the excavated soil to regrade the location to the original contour.

11) Conducting close-out activities to include:

- Restoration of excavation area.

- Surficial cleanup of tracked areas.

- Decontamination of all site equipment and facilities.

- Removal and disposal of stored wastewaters.

- Demobilization of equipment from the site.

Extent of Contamination Survey

12) Mobilize drilling equipment.

13) Perform soil borings and sampling.

14) Decontaminate and demobilize.

3.0 EXCAVATION OF THE TL5 TEST PIT AREA

3.1 SITE PREPARATION

Site preparation will include all activities necessary to prepare the site prior to commencing excavation activities. These activities will include a site reconnaissance inspection, improvement of an access road to the TL5 area, if necessary, and the setup of staging and decontamination facilities.

Reconnaissance Inspection

Prior to mobilization, a site reconnaissance inspection will be conducted. At that time, the extent of the drum burial area will be marked as precisely as is currently known. During the site reconnaissance visit, the accessibility of the TL5 area also will be determined. At that time the decision will be made as to the appropriate degree and method of improving the access road.

Equipment Decontamination Facilities

An equipment decontamination system will be set up within a general support area prior to initiating any activity involving the handling or movement of potentially contaminated materials. The decontamination of equipment will occur within lined roll-off boxes. The lined roll-off boxes will be sloped or bermed such that all wastewaters are totally contained. Decontamination wastewater will be periodically pumped to and contained within a temporary storage tank. A high pressure steam cleaner with self-contained tankage will be used to decontaminate equipment which has contacted waste material, prior to leaving the site. All wastewater collected as a result of equipment decontamination will be treated or disposed of in accordance with federal and state requirements.

Drum Staging

The drum staging area will be located within the general support area. The drums will be staged in lined roll-off boxes. All drums will be stored on pallets within the lined roll-off boxes. The lined roll-off boxes will be used for interim storage of containerized waste while sampling, analysis, and compatibility testing of contents is performed. During periods when access to the drums is not required, the drums staged within the lined roll-off boxes will be covered with a tarp. The tarp will be secured to prevent damage or removal by high winds.

3.2 EXCAVATION OF TL5 TEST PIT AREA

Prior to starting the excavation of the TL5 area, an immediately adjacent area will be covered with 6 mil thick polyethylene sheeting for stockpiling excavated soil. In addition, the drum staging and equipment decontamination facilities will be constructed as described in Section 3.1 prior to starting the excavation.

The excavation of the TL5 Test Pit will be completed by a hydraulic trackhoe. The trackhoe will be equipped with either a sand bucket (i.e., no teeth) or a conventional bucket with a steel plate welded across the teeth of the bucket.

Starting at one end of the existing test pit, soil will be systematically excavated in 1-foot lifts along the full length of the test pit until buried containers are encountered. Excavated soils will be on 6 mil polyethylene sheeting.

Excavation of each 1-foot lift along the test pit will be completed in a slow and controlled manner to minimize damage to any potentially intact drums. Manual probing may be employed to assist in locating drums. When resistance to the trackhoe bucket travel is noted, or when evidence of potential containers or waste disposal is present, soil surrounding the container will first be excavated in order to attempt to free the container. When drums are encountered, surrounding soils will be manually removed until containers are fully uncovered. The location of all buried containers or groups of containers will be appropriately measured with respect to permanent structures onsite.

During the excavation, uncontained solvent waste may be encountered. This condition will be addressed by pumping the liquid from the excavation into temporary storage containers. These temporary storage containers will be staged within the lined roll-off boxes and will be handled, managed, and sampled in a manner consistent with the excavated drummed waste. Drum handling and sampling protocols are discussed in Section 4.0. Additional details of the collection and management of uncontained liquid solvent waste are presented in Section 4.2.

The test pit will be systematically expanded in size until all buried drums have been removed. It is currently anticipated that a large area of buried containerized waste is not present in this area.

Once all drums and uncontained solvent waste have been removed from the excavation and transferred to the drum staging area, the excavation will be backfilled with the soil excavated from the test pit.

4.0 WASTE HANDLING AND CHARACTERIZATION

4.1 DRUM HANDLING

4.1.1 General

Containerized waste, such as 55-gallon drums, is expected to be encountered in the TL5 Test Pit area excavation. When containerized waste is encountered during the excavation, the protocols contained in the Federal Register, Vol. 51, No. 244, Friday, December 19, 1986, Part 1910 - Occupational Safety and Health Standards, 1910.120(j) and this section will apply.

This section applies to all activities involved in the handling of drums or containers that may have contained, or do contain, potentially harmful waste materials in both solid and liquid state. The procedures described within this section specify the minimum requirements that will be implemented to minimize the potential for migration of waste constituents to the surrounding environment.

4.1.2 Equipment

4.1.2.1 Safety Equipment

During the handling of drums or containers, safety apparel and equipment as specified in the Health and Safety Plan will be worn or used at all times. In particular, self-contained breathing apparatus or supplied air system will be worn at all times while handling drums or containers whose contents are unknown.

4.1.2.2 Handling Equipment

All handling, moving, and transporting of drums or containers will be effected with mechanical equipment whenever possible. Movement or handling by personnel may be required in the event that mechanical means cannot be properly or safely employed due to drum or container breakage or leakage.

Until wastes are characterized, portions of equipment that contact drums or containers will preferably be constructed of nonferrous metals. Should steel construction equipment be used, contact portions will be coated or lined to preclude spark generation.

All handling and transport equipment will be equipped with Class ABC fire extinguishers, and self-contained full air respiratory systems if deemed necessary by the Site Health and Safety Officer. All equipment used for the handling and transport of drums or containers will be regularly maintained. In particular, the ignition, manifold, and exhaust components will be maintained to prevent backfiring or generation of sparks within the exhaust gases.

Prior to removal from the site, equipment will be decontaminated within the equipment decontamination facility.

4.1.3 Drum Handling

4.1.3.1 Working Groups

During the excavation of the drums, a team of personnel specifically trained in the handling of containerized waste will be designated to perform this task. This team will contain no fewer than two people. During the handling of containerized waste, visual contact will be maintained between members of the working team at all times. All team members will be able to communicate with ease between themselves and will comply with Health and Safety Plan requirements.

4.1.3.2 Point-of-Excavation Handling

As containerized waste is encountered, and prior to physically handling a drum or container, a preliminary classification checklist will be completed. This list will include a screening of the container for organic vapors with a photoionization detector (PID) or equivalent and a visual description of the drum, container contents, physical state and labeling information (if available and legible), and the condition of the drum or container as it appears in the excavation. Then a unique number will be assigned to each drum. If, during this inspection, an open or leaking drum or container is observed to contain liquids, the liquids will be pumped or bailed into a repack drum prior to removing the drum or container from the excavation. If an open drum or container is identified to contain solids, the drum or container will be carefully removed from the excavation.

If the container is neither open nor leaking, the container will be carefully removed from the excavation and examined for structural integrity. Deteriorated intact containers will be overpacked prior to removal to the staging pad. Containers shall be removed from the excavation by grappler, nonmetallic slings within the trackhoe bucket or by other means that will minimize damage to containers and release of container contents.

After overpacking or repacking, if required, the drums or containers will be transported to the staging pad with a transport truck configured with a suitable carrying apparatus. Intact containers and repacked/overpacked containers will be opened and sampled at the staging pad.

4.1.3.3 Spill Prevention and Response

The handling and transport of drummed waste will be, at all times, conducted in a controlled and safe manner which will minimize damage to the containers and prevent release of the contents. Repack and overpack units will be provided at the excavation area and staging pads for use in the event of leakage or spillage.

In the event that a drum or container of liquid is spilled outside of the excavation areas, the drum handling team will immediately respond to the spill. The spilled liquids will be confined to the immediate area of the spill, and the liquids will be pumped, with the use of a portable hand pump, into a repack drum. Liquids spilled within excavations will be immediately pumped into a repack drum, or allowed to accumulate in collection sumps and then pumped (see Section 4.2).

4.1.4 Initial Drum Sampling

The sampling of drummed wastes will be performed in a staging area. Material handling operations at the staging area will consist of:

1) Segregating solid and liquid waste drums on the basis of visual observation.

2) Collecting representative samples for fingerprint and compatibility testing and waste characterization for disposal purposes.

Once sampled, the drums will then be secured in the staging area and placed with wastes of apparent similar physical characteristics.

Empty drums which are removed from the excavation will be crushed and stored onsite for eventual removal offsite. Drums containing less than 1 inch of residue will be considered empty. New drums which were used for repacking/overpacking will be reused for similar types of wastes if first cleaned of gross contamination. All drums whose contents were consolidated for bulk transport will be crushed and stored onsite for eventual offsite disposal.

The handling and packaging of all excavated drums will be conducted in accordance with the requirements of the Health and Safety Plan.

4.1.5 Storage of Drummed Waste

Drums will remain stored in the staging area until the results of the waste characterization and testing have determined the appropriate disposal alternative.

Following waste characterization (using composite samples of drums from compatibility group) and determination of appropriate method of disposal, the drummed waste will be consolidated with drums of similar waste streams and disposed of offsite in accordance with federal and state regulations for the disposal of hazardous and/or nonhazardous waste.

4.2 UNCONTAINED LIQUID WASTE HANDLING

It is anticipated that uncontained liquid solvent waste will be encountered during excavation of the TL5 area. Such material will be either transferred to temporary storage tanks as it is encountered, or will be allowed to accumulate in collection sumps in the base of the excavation. As discussed in Section 3.2, the excavation will not be backfilled until all recoverable, uncontained liquid solvent waste has been collected. The liquids within the sumps will be transferred to the temporary storage containers as frequently as a pumpable quantity accumulates.

The liquid waste which is collected in this manner undergoes the same sampling, handling, and disposal criteria described in Sections 4.1 and 4.1.5.

4.3 CONTAINERIZED WASTE TESTING

4.3.1 General

Waste characterization and testing will be conducted on representative composite samples of the materials contained in the drums to ensure that drummed materials are consolidated in a safe manner for transport and disposal. The following sections describe the procedures which will be implemented as required to determine the compatibility of the drummed wastes to be consolidated and to characterize materials for the purpose of manifesting and disposal. The final waste characterization and testing requirements will be determined in consultation with the disposal facilities.

4.3.2 Drummed Material Sampling

This section describes the general procedures that will be followed when opening an sampling intact drummed waste containers removed from the excavation area and transported to the staging pad. .

4.3.2.1 Safety Equipment

During the sampling of drummed materials, personal protective equipment, as specified within the Health and Safety Plan, will be worn or used at all times.

Full-face respiratory protection as required by the Health and Safety Plan will be worn at all times while sampling any drummed waste or while cleaning and sampling spilled materials for which physical and hazardous characteristics have not been determined. Air monitoring conducted in accordance with the Health and Safety Plan will identify the need to upgrade respiratory protection during the sampling of drummed materials.

4.3.2.2 Sampling Equipment

Materials and equipment required for sampling are as follows:

- 250 ml wide mouth glass bottle with Teflon cap liner.
- A uniquely numbered sample identification label affixed to sample container.
- Chain of custody data sheets.

- 4-foot by 3/4-inch inside diameter (ID) glass or acrylic sampling thief.
- Steel trowel of "spoon" for collection of solid or sludge samples, if applicable.
- Remotely operated pneumatic ram or check key device.
- Brass mallet and chisel.
- Bung wrench.

4.3.2.3 Presampling Safety Considerations

Extreme care will be exercised in opening drums or other sealed containers in which the contents may be harmful to sampling personnel. When practical, a drum will not be moved or opened unless the drum appears to be structurally sound.

After the initial opening and visual inspection of the drum contents, drums will be segregated visually into two classes, solid or liquid, and moved to the portion of the staging pad reserved for preliminary staging and sampling. Drums will be staged in an upright position. All drums and mechanical equipment will be grounded prior to the commencement of sampling.

During the initial inspection, any customized containers, suspicious looking drums, or drums labeled as containing hazardous materials (explosives, etc.) will be clearly marked for special handling.

4.3.2.4 Drum Entry

All drums will be grounded prior to sampling. If the bung or lid can be removed, the sampling of contained liquids will be safely accomplished by glass thief. Following sampling, the glass thief will be broken and discarded within the drum.

4.3.2.5 Sampling Procedures

The following procedures will be adhered to during sampling of drummed liquid waste.

1. Remove cover from sample container.
2. Insert sampling thief almost to the bottom of the drum or until a solid layer is encountered. About 1 foot of

tubing should extend above the drum. The sample will be collected from a minimum of 12 inches down from the top of the drummed waste.

3. Allow the waste in the drum to reach its natural level in the tube.

4. Cap the top of the sampling tube with a double-gloved thumb or stopper, ensuring liquids do not come into contact with the sampler's thumb or stopper.

5. Carefully remove the capped tube from the drum and insert the uncapped end in the sample container. Do not spill liquid on outside of bottle.

6. Release the thumb or stopper and allow the glass thief to drain completely and fill the sample container. Repeat the above steps until sufficient volume has been collected for analysis.

7. Remove tube from the sample container, break in two pieces, and place the tube in the drum.

8. Cap the sample container tightly and place prelabeled sample container in a carrier.

9. Replace the bung or place plastic over the drum.

Sampling of drummed solids or sludges, if encountered, will in general conform to the preceding procedures with the following exceptions:

1. Sample collection will be accomplished using a steel trowel and spoon. All sampling equipment will be cleaned prior to use and between each sampling interval using the following cleaning protocols:

   - Wash with detergent (Alconox)
   - Rinse with potable water
   - Rinse with deionized water
   - Allow to air dry

2. A representative sample will be collected from a minimum depth of 12 inches from the top of the drum contents upper surface.

3. The sample collected will be a composite of a minimum of four 25 gram samples collected through the drum cross-section.

4.4 DRUMMED WASTE COMPATIBILITY TESTING

Drummed wastes will be segregated according to compatibility characteristics prior to consolidation for disposal. The waste classes determined by the testing referenced in this section will permit an assessment of material incompatibilities and chemical characteristics which need to be further addressed for disposal purposes. Segregated samples, which are determined to have the same compatibility and physical characteristics and thus form a unique waste stream, will be composited and subjected to waste characterization for disposal as described in Section 4.5.

The determination of compatible waste streams will be conducted at an offsite contract laboratory using samples collected in the field following the protocols referenced below:

- Visual Classification - All wastes will be visually classified as to state (liquid or solid), color, viscosity, and other identifying features.

- Phase Determination - Phase determination will be implemented to assess whether the waste is a liquid, solid, or heterogeneous mixture. This determination may sometimes be difficult for very viscous liquids or resins, but it is not crucial because the same characterization tests are performed on both solids and liquids.

4.5 WASTE CHARACTERIZATION FOR DISPOSAL

Analysis of drummed materials, as required by the disposal facilities, will be performed following consolidation and will consist of the analysis of representative composite samples of each waste stream (compatible materials). Alternatively, waste characterization may be performed on representative composites of compatibility groups. The analysis of a composite will be performed prior to performing the actual field consolidation to ensure that consolidated materials are acceptable to the disposal facilities.

The physical and chemical testing protocols which may be required to meet the general testing requirements of various disposal facilities may include the analyses listed in Table 4.1

TABLE 4.1

WASTE CHARACTERIZATION ANALYSIS

Physical Characteristics	
Physical State	Sample inspection
Free Liquids	Sample inspection
Specific Gravity	Volume and weight measurement
pH	EPA SW-846(1), Method 9040
Flash Point	EPA SW-846, Method 1010
Chemical Composition	
Metals	EPA SW-846, Method 6010/7000 series for TAL(2) metals
Organic	
TCL(3)	
Volatiles	EPA SW-846, Method 8260
Pesticides	EPA SW-846, Method 8080
TCL Semi-volatiles	EPA SW-846, Method 8270
Other Components	
Cyanides	EPA SW-846, Method 9010/9012
Sulfides	EPA SW-846, Method 9030
Phenolics	EPA SW-846, Method 8040
Hazardous Characteristics	
Reactivity	EPA SW-846, Section 7.3, Chapter 7
Corrosivity	EPA SW-846, Method 1110
TCLP(4)	EPA SW-846, Method 1311

Note:

(1) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, Revision 1, 1st Update, January 1990.
(2) TAL = Target Analyte List
(3) TCL = Target Compound List
(4) TCLP = Toxicity Characteristic Leaching Procedure

5.0 EXTENT OF CONTAMINATION SURVEY

A soil boring and sampling program will be conducted following excavation, waste removal, and backfilling operations to assess the extent of contamination in the immediate vicinity of the excavated TL5 Test Pit area.

The soil boring program will consist of installing approximately five (5) borings to a depth of approximately 15 feet below ground surface. The locations of the soil borings will be selected on the basis of field observations and all available information indicative of potential contaminant migration.

The soil borings will be installed with hollow stem augers and continuously sampled to their total depth using a 2-foot split spoon sampler. A Mittelhauser geologist will be present to log the corings.

Prior to initiating a new boring, the augers will be steam cleaned. Split spoons will be decontaminated prior to each sample collection using a detergent solution wash and thorough rinse with deionized water. After the recovery of each split spoon, each core will be field screened for photoionizable constituents indicative of volatile organic compounds (VOCs) using an HNU photoionizing detector with a 10.2 eV probe. Based on the gross HNU scan, site geology, and observations of the core matrix, a two-sample complement will be collected from each core. One portion of the two-sample complement will be collected for a field headspace screening with the HNU, and the other portion will be placed on ice and reserved for possible laboratory analysis. The results of the headspace screening will be used to help determine which samples will be submitted for laboratory analysis. At a minimum, one sample per boring will be submitted for laboratory analysis of VOCs using USEPA Publication SW-846 Method 8240.

6.0 HEALTH AND SAFETY

During the Immediate Removal Action program, provisions for health and safety will be implemented which are designed to ensure:

1) Personnel working onsite are not adversely exposed to site contaminants.

2) Site personnel are not endangered by physical hazards such as fire and explosive conditions.

3) The health and safety of the general public and the environment is not compromised by offsite migration of contaminated materials.

4) Compliance with applicable governmental and non-governmental (American Conference of Governmental Industrial Hygienists) regulations and guidelines.

The Health and Safety Plan under which this work will be completed is presented under separate cover.